

REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested.

By this Amendment, claims 1, 12, 22 and 25 are amended. No new matter has been added. Accordingly, after entry of this Amendment, claims 1-34 will remain pending in the patent application.

Applicant appreciates the Examiner's indication that claims 21 and 24 are allowed.

Claims 1-12, 14-20, 22, 23 and 25-34 were rejected under 35 U.S.C. § 102(e) based on U.S. Pat. No. 6,826,607 to Gelvin *et al.* (hereinafter "Gelvin"). The rejection is respectfully traversed.

Claim 1 recites a sensor arrangement comprising, *inter alia*, "a plurality of sensor elements, each sensor provided as an integrated circuit in the substrate; electronic circuitry comprising: i) a processing circuit arranged on the substrate and connected to at least one of the sensor elements, ii) an input/output interface arranged on the substrate and connected to the processing circuit; and a power supply unit arranged on the substrate and configured to supply operating power only to electronic circuitry associated with sensor elements which are in use."

These aspects of claim 1 are amply supported by the embodiments disclosed in the present application. As a non-limiting example, one embodiment shown in Figure 2 of the present invention teaches a silicon substrate 1 that includes various sensors and components arranged thereon. The silicon substrate 1 includes a plurality of sensors 2, a processing unit 5, a memory 6, input/output 8 and power supply 9. The substrate 1 is constructed and arranged to be received in a lithographic apparatus to sense various properties (e.g., optical properties) of the apparatus.

With this said, there is nothing in the cited portions of Gelvin that remotely discloses, teaches or suggests these aspects of claim 1. By way of review, the cited portions of Gelvin disclose a wireless integrated network that includes sensor nodes distributed in the environment. The network includes nodes 802, gateway nodes 804 and server 806. *See* Gelvin at col. 10, lines 46-55.

The Office refers to Figures 42, 8, 31, 23 and 15 of Gelvin, as allegedly disclosing, teaching or suggesting, respectively, the substrate, the plurality of sensors, the processing circuit, the input/output interface and the power supply of claim 1. *See* Office Action at page 2. However, unlike claim 1, none of these elements is arranged on a substrate, as recited in

claim 1. Quite to the contrary, the cited portions of Gelvin make clear that the “sensor nodes 802 are distributed in an environment 899 that is to be monitored or controlled.” *See* Gelvin at col. 10, lines 53-63. Further, elements shown in Figures 42, 8, 31, 23 and 15 are components of a network, and are not arranged on a substrate. Along these lines, Figure 42 of Gelvin shows a substrate 4208 that is adapted to support a single sensor. However, there is no teaching or suggestion in Gelvin that substrate 4208 is configured to support a plurality of sensors and the various components shown in Figures 8, 31, 23 and 15 and identified by the Office Action. Accordingly, for at least these reasons, Applicant respectfully submits that claim 1 is patentable over the cited portions of Gelvin.

Claims 2-10 are patentable over the cited portions of Gelvin at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Applicant respectfully submits that claim 11 is patentable over Gelvin for at least the same reasons as allowed claims 21 and 24. Specifically, claim 11 recites a sensor arrangement comprising, *inter alia*, “iv) a power supply unit said power supply unit configured to supply operating power to at least one other component of the sensor arrangement, wherein the power supply unit is arranged to convert a wireless signal having a first predetermined frequency into a supply voltage for a first part of the sensor arrangement and to convert wireless energy having a second predetermined frequency into a supply voltage for a second part of the sensor arrangement different from the first part.” As noted at page 4 of the Office Action, Gelvin does not disclose, teach or suggest these aspects of claim 11. Accordingly, claim 11 is patentable over Gelvin.

Claim 12 is patentable over the cited portions of Gelvin for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, the cited portions of Gelvin do not disclose, teach or suggest “one or more sensor arrangements, each sensor arrangement having: i) a plurality of sensor elements, each sensor element provided as an integrated circuit in the substrate and associated with electronic circuitry that comprises: a) a processing circuit arranged on the substrate and connected to at least one of the sensor elements; and b) an input/output interface arranged on the substrate and connected to the processing circuit; and ii) a power supply unit arranged on the substrate and configured to supply operating power only to electronic circuitry associated with one or more of the plurality of sensor elements which are in use.”

Equally important is the fact that the cited portions of Gelvin are silent as to a lithographic apparatus. According to claim 12, the one or more sensor arrangements are

included in a lithographic apparatus. Applicant respectfully submits that the Office has not considered this aspect of claim 12. Thus, for this additional reason, claim 12 is patentable over the cited portions of Gelvin.

Claims 13-20 are patentable over the cited portions of Gelvin at least by virtue of their dependency from claim 12 and for the additional features recited therein.

Claim 22 is patentable over the cited portions of Gelvin for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, the cited portions of Gelvin do not disclose, teach or suggest a method comprising, *inter alia*, “removing the sensor arrangement from the device, wherein the sensor arrangement comprises: i) a substrate; ii) a plurality of sensor elements, each sensor element provided as an integrated circuit in the substrate and associated with electronic circuitry comprising that comprises: a) a processing circuit arranged on the substrate and connected to at least one of the sensor elements, and b) an input/output interface arranged on the substrate and connected to the processing circuit; and ii) a power supply unit arranged on the substrate and configured to supply operating power only to electronic circuitry associated with one or more of the plurality of sensor elements which are in use.”

Claim 23 is patentable over the cited portions of Gelvin at least by virtue of their dependency from claim 22 and for the additional features recited therein.

Claim 25 is patentable over the cited portions of Gelvin for at least similar reasons as provided above for claim 1 and for the features recited therein. For example, the cited portions of Gelvin do not disclose, teach or suggest a sensor arrangement comprising, *inter alia*, “a plurality of sensor elements, each sensor element provided as an integrated circuit in the substrate; and electronic circuitry comprising: i) a processing circuit arranged on the substrate and connected to at least one of the sensor elements, ii) an input/output interface arranged on the substrate and connected to the processing circuit; and iii) a power supply unit arranged on the substrate and configured to supply operating power to a processing circuit associated with one or more of the plurality of sensor elements which are in use.”

Claims 26-34 are patentable over the cited portions of Gelvin at least by virtue of their dependency from claim 25 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-12, 14-20, 22, 23 and 25-34 under 35 U.S.C. § 102(e) based on Gelvin are respectfully requested.

Claim 13 was objected to, but would be allowable if rewritten in independent form. However, claim 13 is patentable over the cited portions of Gelvin at least by virtue of its dependency from claim 12.

Applicant has addressed the Examiner's rejection and objection and respectfully submits that the application is in condition for allowance. A notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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